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PATENT APPLICATION

ATTORNEY DOCKET NO. 10012383-1

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED
CENTRAL FAX CENTER

Inventor(s): Thane M. Larson et al.

Confirmation No.: FEB 07 2005

Application No.: 09/924,163

Examiner: Tim T. Vo

Filing Date: Aug. 7, 2001

Group Art Unit: 2112

Title: DEDICATED SERVER MANAGEMENT CARD WITH HOT SWAP FUNCTIONALITY

Mail Stop Appeal Brief-Patents
Commissioner For Patents
PO Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith is the Appeal Brief in this application with respect to the Notice of Appeal filed on Dec. 7, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$500.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$120.00
() two months	\$450.00
() three months	\$1020.00
() four months	\$1590.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$500.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

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Signature: 

Respectfully submitted,

Thane M. Larson et al.

By 

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Thane M. Larson et al.

Examiner: Tim T. Vo

Serial No.: 09/924,163

Group Art Unit: 2112

Filed: August 7, 2001

Docket No.: 10012383-1 (H300.167.101)

Due Date: February 7, 2005Title: DEDICATED SERVER MANAGEMENT CARD WITH HOT SWAP
FUNCTIONALITYRECEIVED
CENTRAL FAX CENTER
FEB 07 2005**APPEAL BRIEF TO THE BOARD OF
PATENT APPEALS AND INTERFERENCES OF THE
UNITED STATES PATENT AND TRADEMARK OFFICE****Mail Stop Appeal Brief-Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Dear Sir:

Appeal Brief

This brief is presented in support of the Notice of Appeal filed on December 7, 2004, from the final rejection dated August 31, 2004, and the Advisory Action dated November 9, 2004, of the Examiner rejecting claims 1-19 of the above identified application. Claims 1-19 remain for consideration.

The U.S. Patent and Trademark Office is hereby authorized to charge Deposit Account No. 08-2025 in the amount of \$500.00 for filing a Brief in Support of an Appeal as set forth under 37 C.F.R. 1.17(c), however, at any time during the pendency of this application, please charge any fees required or credit any overpayment to Deposit Account 08-2025 pursuant to 37 C.F.R. 1.25. Additionally, please charge any fees to Deposit Account 08-2025 under 37 C.F.R. 1.16, 1.17, 1.19, 1.20 and 1.21. Appellant respectfully requests reversal of the Examiner's rejection of pending claims 1-19.

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Real Party in Interest

The real party in interest is Hewlett-Packard Development Company, LP.

Related Appeals and Interferences

There are no other prior and pending appeals, interferences or judicial proceedings which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in this Appeal.

Status of Claims

The Examiner rejected claims 1-3, 6-9, 12-15, 18, and 19 under 35 U.S.C. §102(e) as being anticipated by Chen et al., U.S. Patent No. 6,591,324 ("Chen"). The Examiner rejected claims 4, 10, and 16 under 35 U.S.C. §103(a) as being unpatentable over Chen. Claims 5, 11, and 17 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chen in view of Bassman et al., U.S. Patent No. 6,295,567 ("Bassman"). No claims have been allowed. Claims 1-19 are appealed herein.

Status of Amendments

No amendments have been entered subsequent to the Final Office Action mailed August 31, 2004. The claims listed in the Claims Appendix reflect the claims as of August 31, 2004. A Response After Final was filed on October 28, 2004, but no amendments to the claims were proposed by Appellants or entered by the Examiner.

Summary of Claimed Subject Matter

The Summary is set forth as an exemplary embodiment as the language corresponding to independent claims 1, 8, and 14. Discussions about elements of claims 1, 8, and 14 can be found at least at the cited locations in the specification and drawings.

The present invention, as claimed in independent claim 1, provides a server system. The server system includes a plurality of printed circuit assemblies including a plurality of host processor cards. The server system includes a management card coupled to the plurality of printed circuit assemblies, the management card dedicated to monitoring and managing

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operation of the server system, including monitoring and managing on-line insertion and removal of the printed circuit assemblies. (See, e.g., specification at page 4, line 6 to page 6, line 2; page 7, line 4 to page 18, line 6; Figures 1, 2, 3, and 5; reference numbers 100, 300A-300E).

The present invention, as claimed in independent claim 8, provides a method of managing a server system. The method includes providing a plurality of host processor cards for running customer operating systems and applications. The method includes providing a dedicated management card that does not run customer operating systems and applications. The method includes monitoring and managing operation of the plurality of host processor cards with the dedicated management card, including monitoring and managing hot swapping of the host processor cards. (See, e.g., specification at page 4, line 6 to page 6, line 2; page 7, line 4 to page 18, line 6; Figures 1, 2, 3, and 5; reference numbers 100, 300A-300E).

The present invention, as claimed in independent claim 14, provides a management-dedicated server management card for a server system having a plurality of removable cards. The server management card includes a memory for storing server management software. The server management card includes a controller coupled to the plurality of removable cards for monitoring and managing operation of the server system based on the server management software. The controller provides hot-swap functionality for the plurality of removable cards. The server management card includes a multiple-port LAN switch coupled to the controller and configured to be coupled to a management connection of at least one of the plurality of removable cards. (See, e.g., specification at page 4, line 6 to page 6, line 2; page 7, line 4 to page 18, line 6; Figures 1, 2, 3, and 5; reference numbers 100, 300A-300E, 500, 504, 508, 530, and 532).

Grounds of Rejection to be Reviewed on Appeal

- I. Claims 1-3, 6-9, 12-15, 18, and 19 stand rejected under 35 U.S.C. §102(e) as being anticipated by Chen et al., U.S. Patent No. 6,591,324 ("Chen").
- II. Claims 4, 10, and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chen.
- III. Claims 5, 11, and 17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Chen in view of Bassman et al., U.S. Patent No. 6,295,567 ("Bassman").

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Argument

I. The Rejection of Claims 1-3, 6-9, 12-15, 18, and 19 under 35 U.S.C. §102(e) as being Anticipated by Chen

The Examiner rejected claims 1-3, 6-9, 12-15, 18, and 19 under 35 U.S.C. §102(e) as being anticipated by Chen et al., U.S. Patent No. 6,591,324 ("Chen"). Appellants respectfully submit that Chen does not teach or suggest the invention of independent claims 1, 8, and 14, and the claims depending therefrom.

"A claim is anticipated if each and every element as set forth in the claim is found, either expressly or inherently described, in a single, prior art reference." *Verdegaal Bros. v. Union Oil Co., of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

A. The Rejection of Claims 1 and 3 under 35 U.S.C. §102(e) as being Anticipated by Chen

The Examiner's rejection of independent claim 1 under 35 U.S.C. §102(e) as being anticipated by Chen is not correct and should be withdrawn. Independent claim 1 includes the limitations "a plurality of printed circuit assemblies including a plurality of host processor cards" and "a management card dedicated to monitoring and managing operation of the server system" Chen does not teach or suggest a server system that includes a plurality of host processor cards and a management card dedicated to monitoring and managing operation of a server system, as recited in independent claim 1. Rather, as shown in Figure 2 of Chen, for example, the system 100 includes an I/O card 106, a SCSI card 108, a network card 110, and two processor cards 120. There is no teaching or suggestion in Chen that any of these cards 106, 108, 110, or 120 are a management card dedicated to monitoring and managing operation of a server system.

The Examiner indicated that one of the two processor cards "105" is a management card as recited in claim 1. (Office Action at para. no. 2, page 2). Element "105" is actually one of the two processors "slots" into which one of the two processor cards 120 is inserted. If the Examiner contends that one of the two processor cards 120 is a management card as

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recited in claim 1, then Chen does not satisfy the limitations “a plurality of host processor cards”, as there is only one remaining processor card 120. In addition, neither of the two processor cards 120 of Chen is “dedicated” to monitoring and managing operation of a server system, as recited in claim 1. Rather, the processor cards 120 of Chen are used to read and write information to an array of hard disk drives 202, as well as perform some monitoring and management functions. (See, e.g., Chen at col. 4, lines 16-24). The Background of the Invention section of the present application sets forth several problems with this approach of adding management functions to an existing processor card.

The Examiner stated with respect to Chen “see figure 2, plurality of printed circuit cards 104 are host processor cards”. (Office Action at para. no. 2, page 2). Elements “104” are actually add-on-card “slots” into which the I/O card 106, SCSI card 108, and Network card 110 are inserted. There is no teaching or suggestion in Chen that any of the cards 106, 108, or 110 are host processor cards. Chen clearly distinguishes between “processor cards” and other types of cards, such as cards 106, 108, and 110. (See, e.g., Chen at Figure 2, and corresponding description). The Examiner’s contention that cards 106, 108, and 110 are “processor cards” is contrary to the explicit teachings of Chen.

In view of the above, independent claim 1 is not taught or suggested by Chen. Appellants submit that independent claim 1 is not anticipated by Chen, and respectfully request that the rejection of independent claim 1 under 35 U.S.C. § 102(e) be withdrawn.

Dependent claim 3, which further limits patentably distinct claim 1, is also believed to be allowable over the cited reference. Appellants submit that dependent claim 3 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 3 under 35 U.S.C. § 102(e) be withdrawn.

B. The Rejection of Claim 2 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 2 further limits patentably distinct claim 1, and is believed to be allowable over the cited reference. Dependent claim 2 is also further distinguishable over the cited reference. Dependent claim 2 recites “wherein the management card includes a management processor and a LAN switch, the LAN switch coupled to management connections of the plurality of host processor cards, and management connections of the management processor.” With respect to claim 2, the Examiner stated “see figure 2 [of

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Chen], second processor card 105 and column 4 lines 30-38 and column 3 lines 45-55, wherein the second processor 105 has the power switching 122, signal switching circuitry 128 to control networking (LAN) connection". (Office Action at para. no. 3, page 3). Figure 2 of Chen, which was cited by the Examiner, does not show that either of the two processor cards 120 includes a LAN switch. Column 4, lines 30-38 of Chen, which was cited by the Examiner, discloses that the two processor cards 120 (Figure 2) are connected together via communications line 140, and that "[t]his communication line 140 may be of any sort, preferably using a standard port. Examples include using a local area networking (LAN) connection, a serial connection (such as RS-232), a universal serial bus (USB) connection, or a fiber channel connection." Thus, this portion of Chen cited by the Examiner indicates that the two processor cards 120 could be connected together via a LAN connection. However, this cited portion of Chen does not teach or suggest that either of the two processor cards 120 includes a "LAN switch" as recited in claim 2, let alone a LAN switch that is coupled to management connections of a plurality of host processor cards, and management connections of a management processor.

Column 3, lines 45-55 of Chen, which was cited by the Examiner, discloses that the add-on cards and the processor cards include power switching circuitry, signal switching circuitry, and PCI circuitry. There is no teaching or suggestion in this cited portion of Chen, or any other part of Chen, that the power switching circuitry, signal switching circuitry, or the PCI circuitry, is a LAN switch, includes a LAN switch, or could or should be modified to include a LAN switch. Chen does not teach or suggest "the management card includes a management processor and a LAN switch, the LAN switch coupled to management connections of the plurality of host processor cards, and management connections of the management processor", as recited in dependent claim 2.

In view of the above, dependent claim 2 is not taught or suggested by Chen. Appellants submit that dependent claim 2 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 2 under 35 U.S.C. § 102(e) be withdrawn.

C. The Rejection of Claim 6 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 6 further limits patentably distinct claim 1, and is believed to be allowable over the cited reference. Dependent claim 6 is also further distinguishable over the

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cited reference. Dependent claim 6 recites "wherein the management card further comprises: a plurality of LEDs for providing server status information." With respect to claim 6, the Examiner stated "Chen teaches providing status information on the management card (see column 4 lines 50-56)." Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that "[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120." There is no teaching or suggestion in this cited portion of Chen regarding LEDs. Chen does not teach or suggest a management card that includes a plurality of LEDs for providing server status information, as recited in dependent claim 6.

In view of the above, dependent claim 6 is not taught or suggested by Chen. Appellants submit that dependent claim 6 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 6 under 35 U.S.C. § 102(e) be withdrawn.

D. The Rejection of Claim 7 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 7 further limits patentably distinct claim 1, and is believed to be allowable over the cited reference. Dependent claim 7 is also further distinguishable over the cited reference. Dependent claim 7 recites "wherein the management card further comprises: a plurality of serial ports for communicating with the management card." With respect to claim 7, the Examiner stated "Chen teaches providing status information on the management card (see column 4 lines 50-56)." Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that "[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120." There is no teaching or suggestion in this cited portion of Chen regarding serial ports. Chen does not teach or suggest a management card that includes a plurality of serial ports for communication with the management card as recited in dependent claim 7.

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In view of the above, dependent claim 7 is not taught or suggested by Chen. Appellants submit that dependent claim 7 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 7 under 35 U.S.C. § 102(e) be withdrawn.

E. The Rejection of Claim 8 under 35 U.S.C. §102(e) as being Anticipated by Chen

The Examiner's rejection of independent claim 8 under 35 U.S.C. §102(e) as being anticipated by Chen is not correct and should be withdrawn. Independent claim 8 includes the limitations "providing a plurality of host processor cards for running customer operating systems and applications", "providing a dedicated management card that does not run customer operating systems and applications", and "monitoring and managing operation of the plurality of host processor cards with the dedicated management card". Chen does not teach or suggest these limitations of claim 8. Rather, as shown in Figure 2 of Chen, for example, the system 100 includes an I/O card 106, a SCSI card 108, a network card 110, and two processor cards 120. There is no teaching or suggestion in Chen that any of these cards 106, 108, 110, or 120 are a dedicated management card that does not run customer operating systems and applications, and that monitors and manages operation of a plurality of host processor cards.

The Examiner indicated that one of the two processor cards "105" is a dedicated management card as recited in claim 8. (Office Action at para. no. 2, page 2). Element "105" is actually one of the two processors "slots" into which one of the two processor cards 120 is inserted. If the Examiner contends that one of the two processor cards 120 is a dedicated management card as recited in claim 1, then Chen does not satisfy the limitations "a plurality of host processor cards", as there is only one remaining processor card 120. In addition, there is no teaching or suggestion in Chen that either of the two processor cards 120 of Chen is a "dedicated management card" that does not run customer operating systems and applications, as recited in claim 8.

The Examiner stated with respect to Chen "see figure 2, plurality of printed circuit cards 104 are host processor cards". (Office Action at para. no. 2, page 2). Elements "104" are actually add-on-card "slots" into which the I/O card 106, SCSI card 108, and Network card 110 are inserted. There is no teaching or suggestion in Chen that any of the cards 106, 108, or 110 are host processor cards, or that any of these cards 106, 108, or 110 run customer

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operating systems and applications. Chen clearly distinguishes between “processor cards” and other types of cards, such as cards 106, 108, and 110. (See, e.g., Chen at Figure 2, and corresponding description). The Examiner’s contention that cards 106, 108, and 110 are “processor cards” is contrary to the explicit teachings of Chen.

In view of the above, independent claim 8 is not taught or suggested by Chen. Appellants submit that independent claim 8 is not anticipated by Chen, and respectfully request that the rejection of independent claim 8 under 35 U.S.C. § 102(e) be withdrawn.

F. The Rejection of Claim 9 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 9 further limits patentably distinct claim 8, and is believed to be allowable over the cited reference. Dependent claim 9 is also further distinguishable over the cited reference. Dependent claim 9 recites “monitoring management LAN communications of the plurality of host processor cards with the management card.” With respect to claim 9, the Examiner stated “see figure 2 [of Chen], second processor card 105 and column 4 lines 30-38 and column 3 lines 45-55, wherein the second processor 105 has the power switching 122, signal switching circuitry 128 to control networking (LAN) connection”. (Office Action at para. no. 3, page 3). Figure 2 of Chen, which was cited by the Examiner, does not show a management card that monitors management LAN communications of a plurality of host processor cards. Column 4, lines 30-38 of Chen, which was cited by the Examiner, discloses that the two processor cards 120 (Figure 2) are connected together via communications line 140, and that “[t]his communication line 140 may be of any sort, preferably using a standard port. Examples include using a local area networking (LAN) connection, a serial connection (such as RS-232), a universal serial bus (USB) connection, or a fiber channel connection.” Thus, this portion of Chen cited by the Examiner indicates that the two processor cards 120 could be connected together via a LAN connection. However, there is no teaching or suggestion in Chen that this LAN connection is monitored by a dedicated management card.

Column 3, lines 45-55 of Chen, which was cited by the Examiner, discloses that the add-on cards and the processor cards include power switching circuitry, signal switching circuitry, and PCI circuitry. There is no teaching or suggestion in this cited portion of Chen, or any other part of Chen, that the power switching circuitry, signal switching circuitry, or the PCI circuitry, is implemented on a dedicated management card, or that the circuitry monitors

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management LAN communications of a plurality of host processor cards. Chen does not teach or suggest "monitoring management LAN communications of the plurality of host processor cards with the management card", as recited in dependent claim 9.

In view of the above, dependent claim 9 is not taught or suggested by Chen. Appellants submit that dependent claim 9 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 9 under 35 U.S.C. § 102(e) be withdrawn.

G. The Rejection of Claim 12 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 12 further limits patentably distinct claim 8, and is believed to be allowable over the cited reference. Dependent claim 12 is also further distinguishable over the cited reference. Dependent claim 12 recites "providing status information on the management card via a plurality of LEDs." With respect to claim 12, the Examiner stated "Chen teaches providing status information on the management card (see column 4 lines 50-56)." Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that "[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120." There is no teaching or suggestion in this cited portion of Chen regarding LEDs. Chen does not teach or suggest "providing status information on the management card via a plurality of LEDs", as recited in dependent claim 12.

In view of the above, dependent claim 12 is not taught or suggested by Chen. Appellants submit that dependent claim 12 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 12 under 35 U.S.C. § 102(e) be withdrawn.

H. The Rejection of Claim 13 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 13 further limits patentably distinct claim 8, and is believed to be allowable over the cited reference. Dependent claim 13 is also further distinguishable over the cited reference. Dependent claim 13 recites "communicating with the management card via at least one of a plurality of serial ports on the management card." With respect to claim 13, the Examiner stated "Chen teaches providing status information on the management card

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(see column 4 lines 50-56).” Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that “[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120.” There is no teaching or suggestion in this cited portion of Chen regarding serial ports. Chen does not teach or suggest “communicating with the management card via at least one of a plurality of serial ports on the management card”, as recited in dependent claim 13.

In view of the above, dependent claim 13 is not taught or suggested by Chen. Appellants submit that dependent claim 13 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 13 under 35 U.S.C. § 102(e) be withdrawn.

I. The Rejection of Claim 14 under 35 U.S.C. §102(e) as being Anticipated by Chen

The Examiner’s rejection of independent claim 14 under 35 U.S.C. §102(e) as being anticipated by Chen is not correct and should be withdrawn. Independent claim 14 is directed to a “management-dedicated server management card”, and includes the limitation “a multiple-port LAN switch coupled to the controller and configured to be coupled to a management connection of at least one of the plurality of removable cards”. Chen does not teach or suggest a management-dedicated server management card with a multiple-port LAN switch as recited in independent claim 14. Rather, as shown in Figure 2 of Chen, for example, the system 100 includes an I/O card 106, a SCSI card 108, a network card 110, and two processor cards 120. There is no teaching or suggestion in Chen that any of these cards 106, 108, 110, or 120 is a management-dedicated server management card.

The Examiner indicated that one of the two processor cards “105” is a management-dedicated server management card as recited in claim 14. (Office Action at para. no. 2, page 2). Element “105” is actually one of the two processors “slots” into which one of the two processor cards 120 is inserted. Neither of the two processor cards 120 of Chen is a “management-dedicated server management card”, as recited in claim 14. Rather, the processor cards 120 of Chen are used to read and write information to an array of hard disk drives 202, and are not dedicated to management. (See, e.g., Chen at col. 4, lines 16-24).

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The Examiner did not address the limitation “a multiple-port LAN switch coupled to the controller and configured to be coupled to a management connection of at least one of the plurality of removable cards” in the Examiner’s rejection of claim 14 on pages 2 and 3 of the current Office Action. However, with respect to dependent claims 2, 9, and 15, the Examiner stated “see figure 2 [of Chen], second processor card 105 and column 4 lines 30-38 and column 3 lines 45-55, wherein the second processor 105 has the power switching 122, signal switching circuitry 128 to control networking (LAN) connection”. (Office Action at para. no. 3, page 3).

Figure 2 of Chen, which was cited by the Examiner, does not show that either of the two processor cards 120 includes a multiple-port LAN switch. Column 4, lines 30-38 of Chen, which was cited by the Examiner, discloses that the two processor cards 120 (Figure 2) are connected together via communications line 140, and that “[t]his communication line 140 may be of any sort, preferably using a standard port. Examples include using a local area networking (LAN) connection, a serial connection (such as RS-232), a universal serial bus (USB) connection, or a fiber channel connection.” Thus, this portion of Chen cited by the Examiner indicates that the two processor cards 120 could be connected together via a LAN connection. However, this cited portion of Chen does not teach or suggest that either of the two processor cards 120 includes a “multiple-port LAN switch” as recited in claim 14, let alone a multiple-port LAN switch that is coupled to a controller of a management-dedicated server management card and is configured to be coupled to a management connection of at least one of a plurality of removable cards.

Column 3, lines 45-55 of Chen, which was cited by the Examiner, discloses that the add-on cards and the processor cards include power switching circuitry, signal switching circuitry, and PCI circuitry. There is no teaching or suggestion in this cited portion of Chen, or any other part of Chen, that the power switching circuitry, signal switching circuitry, or the PCI circuitry, is a multiple-port LAN switch, includes a multiple-port LAN switch, or could or should be modified to include a multiple-port LAN switch. Chen does not teach or suggest “a multiple-port LAN switch coupled to the controller and configured to be coupled to a management connection of at least one of the plurality of removable cards”, as recited in independent claim 14.

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In view of the above, independent claim 14 is not taught or suggested by Chen. Appellants submit that independent claim 14 is not anticipated by Chen, and respectfully request that the rejection of independent claim 14 under 35 U.S.C. § 102(e) be withdrawn.

J. The Rejection of Claim 15 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 15 further limits patentably distinct claim 14, and is believed to be allowable over the cited reference. Dependent claim 15 is also further distinguishable over the cited reference. Dependent claim 15 recites “wherein the LAN switch is coupled to the management connections of a plurality of the removable cards for monitoring management LAN communications.” With respect to claim 15, the Examiner stated “see figure 2 [of Chen], second processor card 105 and column 4 lines 30-38 and column 3 lines 45-55, wherein the second processor 105 has the power switching 122, signal switching circuitry 128 to control networking (LAN) connection”. (Office Action at para. no. 3, page 3). Figure 2 of Chen, which was cited by the Examiner, does not show a management-dedicated server management card that includes a multiple-port LAN switch that is coupled a controller of the management card and to management connections of a plurality of removable cards for monitoring management LAN communications.

Column 4, lines 30-38 of Chen, which was cited by the Examiner, discloses that the two processor cards 120 (Figure 2) are connected together via communications line 140, and that “[t]his communication line 140 may be of any sort, preferably using a standard port. Examples include using a local area networking (LAN) connection, a serial connection (such as RS-232), a universal serial bus (USB) connection, or a fiber channel connection.” Thus, this portion of Chen cited by the Examiner indicates that the two processor cards 120 could be connected together via a LAN connection. However, there is no teaching or suggestion in Chen that either of the processor cards 120 includes a multiple-port LAN switch that is coupled a controller of the processor card and to management connections of a plurality of removable cards for monitoring management LAN communications.

Column 3, lines 45-55 of Chen, which was cited by the Examiner, discloses that the add-on cards and the processor cards include power switching circuitry, signal switching circuitry, and PCI circuitry. There is no teaching or suggestion in this cited portion of Chen, or any other part of Chen, that the power switching circuitry, signal switching circuitry, or the

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PCI circuitry, is implemented on a management-dedicated server management card, or that the circuitry includes a multiple-port LAN switch that is coupled to management connections of a plurality of removable cards for monitoring management LAN communications. Chen does not teach or suggest "the LAN switch is coupled to the management connections of a plurality of the removable cards for monitoring management LAN communications", as recited in dependent claim 15.

In view of the above, dependent claim 15 is not taught or suggested by Chen. Appellants submit that dependent claim 15 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 15 under 35 U.S.C. § 102(e) be withdrawn.

K. The Rejection of Claim 18 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 18 further limits patentably distinct claim 14, and is believed to be allowable over the cited reference. Dependent claim 18 is also further distinguishable over the cited reference. Dependent claim 18 recites "a plurality of LEDs for providing server status information." With respect to claim 18, the Examiner stated "Chen teaches providing status information on the management card (see column 4 lines 50-56)." Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that "[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120." There is no teaching or suggestion in this cited portion of Chen regarding LEDs. Chen does not teach or suggest a management-dedicated server management card that includes a plurality of LEDs for providing server status information, as recited in dependent claim 18.

In view of the above, dependent claim 18 is not taught or suggested by Chen. Appellants submit that dependent claim 18 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 18 under 35 U.S.C. § 102(e) be withdrawn.

L. The Rejection of Claim 19 under 35 U.S.C. §102(e) as being Anticipated by Chen

Dependent claim 19 further limits patentably distinct claim 14, and is believed to be allowable over the cited reference. Dependent claim 19 is also further distinguishable over

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the cited reference. Dependent claim 19 recites "a plurality of serial ports for transmitting and receiving serial communications." With respect to claim 19, the Examiner stated "Chen teaches providing status information on the management card (see column 4 lines 50-56)." Column 4 lines 50-56 of Chen, which was cited by the Examiner, discloses that "[t]he first processor card 120 remains, however, in communication with the second processor card 120 via the communications line 140, and periodically informs the second processor card 120 of its health, that is, of the perceived health of the first processor card 120. Furthermore, the health of the first processor card 120 may be actively monitored by the second processor card 120." There is no teaching or suggestion in this cited portion of Chen regarding serial ports. Chen does not teach or suggest a management-dedicated server management card that includes a plurality of serial ports for transmitting and receiving serial communications", as recited in dependent claim 19.

In view of the above, dependent claim 19 is not taught or suggested by Chen. Appellants submit that dependent claim 19 is not anticipated by Chen, and respectfully request that the rejection of dependent claim 19 under 35 U.S.C. § 102(e) be withdrawn.

II. The rejection of claims 4, 10, and 16 under 35 U.S.C. §103(a) as being Unpatentable over Chen

The Examiner rejected claims 4, 10, and 16 under 35 U.S.C. §103(a) as being unpatentable over Chen. Appellants submit that the Examiner has not established a case of *prima facie* obviousness of claims 4, 10, and 16.

The Examiner has the burden under 35 U.S.C. §103 to establish a *prima facie* case of obviousness. *In re Fine*, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). Three criteria must be satisfied to establish a *prima facie* case of obviousness. First, the Examiner must show that some objective teaching in the prior art or some knowledge generally available to one of ordinary skill in the art would teach, suggest, or motivate one to modify a reference or to combine the teachings of multiple references. *Id.* Second, the prior art can be modified or combined only so long as there is a reasonable expectation of success. *In re Merck & Co., Inc.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Third, the prior art reference or combined prior art references must teach or suggest all of the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). These three criteria are also set

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forth in §706.02(j) of the M.P.E.P.

Even when obviousness is based on a single reference, there must be a showing of suggestion or motivation to modify the teachings of that reference. *In re Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). In performing the obviousness inquiry under 35 U.S.C. §103, the Examiner must avoid hindsight. *In re Bond*, 910 F.2d 831, 834, 15 USPQ2d 1566, 1568 (Fed. Cir. 1990), *reh'g denied*, 1990 U.S. App. LEXIS 19971 (Fed. Cir. 1990).

A. The rejection of claim 4 under 35 U.S.C. §103(a) as being Unpatentable over Chen

Dependent claim 4 is dependent on independent claim 1. As described above with respect to independent claim 1, Chen does not teach or suggest each and every limitation of this independent claim. Dependent claim 4 further limits patentably distinct claim 1, is further distinguishable over the cited reference, and is believed to be allowable over the cited reference. The Examiner has not established a case of *prima facie* obviousness of claim 4, and Appellants respectfully request that the rejection of dependent claim 4 under 35 U.S.C. § 103(a) be withdrawn.

B. The rejection of claim 10 under 35 U.S.C. §103(a) as being Unpatentable over Chen

Dependent claim 10 is dependent on independent claim 8. As described above with respect to independent claim 8, Chen does not teach or suggest each and every limitation of this independent claim. Dependent claim 10 further limits patentably distinct claim 8, is further distinguishable over the cited reference, and is believed to be allowable over the cited reference. The Examiner has not established a case of *prima facie* obviousness of claim 10, and Appellants respectfully request that the rejection of dependent claim 10 under 35 U.S.C. § 103(a) be withdrawn.

C. The rejection of claim 16 under 35 U.S.C. §103(a) as being Unpatentable over Chen

Dependent claim 16 is dependent on independent claim 14. As described above with respect to independent claim 14, Chen does not teach or suggest each and every limitation of this independent claim. Dependent claim 16 further limits patentably distinct claim 14, is further distinguishable over the cited reference, and is believed to be allowable over the cited reference. The Examiner has not established a case of *prima facie* obviousness of claim 16,

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and Appellants respectfully request that the rejection of dependent claim 16 under 35 U.S.C. § 103(a) be withdrawn.

III. The rejection of claims 5, 11, and 17 under 35 U.S.C. §103(a) as being Unpatentable over Chen in view of Bassman

The Examiner rejected claims 5, 11, and 17 under 35 U.S.C. §103(a) as being unpatentable over Chen in view of Bassman. Appellants submit that the Examiner has not established a case of *prima facie* obviousness of claims 5, 11, and 17.

A. The rejection of claim 5 under 35 U.S.C. §103(a) as being Unpatentable over Chen in view of Bassman

Dependent claim 5 is dependent on independent claim 1. As described above with respect to independent claim 1, Chen does not teach or suggest each and every limitation of this independent claim. Bassman also does not teach or suggest the limitations of independent claim 1 addressed above. There is also no suggestion to combine the cited references. Since dependent claim 5 further limits patentably distinct claim 1, claim 5 is believed to be allowable over the cited references.

Dependent claim 5 is also further distinguishable over the cited references. Dependent claim 5 recites “**the management card** configured to adjust the speed of the at least one cooling fan based on temperature data provided by the at least one temperature sensor.” (emphasis added). The Examiner has acknowledged with respect to claims 5, 11, and 17 that “Chen does not expressly teach cooling fan, temperature sensor and controlling the fan speed.” (Office Action at para. no. 8, page 4). Bassman discloses an embedded controller 605 that controls the speed of each fan. (Bassman at col. 8, lines 42-43). However, Bassman includes no teaching or suggestion that the embedded controller 605, or any portion thereof, could or should be incorporated into a management card as recited in the claims. The Examiner appears to argue that one of the processor cards 120 of Chen is a “management card” as recited in claim 1. (See, e.g., Office Action at para. no. 2, page 2). Bassman also includes no teaching or suggestion that the embedded controller 605 could or should be incorporated into a processor card, such as one of the processor cards 120 disclosed in Chen.

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Dependent claim 5 further limits patentably distinct claim 1, is further distinguishable over the cited references, and is believed to be allowable over the cited references. The Examiner has not established a case of *prima facie* obviousness of claim 5, and Appellants respectfully request that the rejection of dependent claim 5 under 35 U.S.C. § 103(a) be withdrawn.

B. The rejection of claim 11 under 35 U.S.C. §103(a) as being Unpatentable over Chen in view of Bassman

Dependent claim 11 is dependent on independent claim 8. As described above with respect to independent claim 8, Chen does not teach or suggest each and every limitation of this independent claim. Bassman also does not teach or suggest the limitations of independent claim 8 addressed above. There is also no suggestion to combine the cited references. Since dependent claim 11 further limits patentably distinct claim 8, claim 11 is believed to be allowable over the cited references.

Dependent claim 11 is also further distinguishable over the cited references. Dependent claim 11 recites "monitoring the temperature of the server system **with the management card**; and adjusting the speed of at least one cooling fan **with the management card** based on temperature data." The Examiner has acknowledged with respect to claims 5, 11, and 17 that "Chen does not expressly teach cooling fan, temperature sensor and controlling the fan speed." (Office Action at para. no. 8, page 4). Bassman discloses an embedded controller 605 that controls the speed of each fan. (Bassman at col. 8, lines 42-43). However, Bassman includes no teaching or suggestion that the embedded controller 605, or any portion thereof, could or should be incorporated into a management card as recited in the claims. The Examiner appears to argue that one of the processor cards 120 of Chen is a "management card" as recited in claim 1. (See, e.g., Office Action at para. no. 2, page 2). Bassman also includes no teaching or suggestion that the embedded controller 605 could or should be incorporated into a processor card, such as one of the processor cards 120 disclosed in Chen.

Dependent claim 11 further limits patentably distinct claim 8, is further distinguishable over the cited references, and is believed to be allowable over the cited references. The Examiner has not established a case of *prima facie* obviousness of claim 11,

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and Appellants respectfully request that the rejection of dependent claim 11 under 35 U.S.C. § 103(a) be withdrawn.

C. The rejection of claim 17 under 35 U.S.C. §103(a) as being Unpatentable over Chen in view of Bassman

Dependent claim 17 is dependent on independent claim 14. As described above with respect to independent claim 14, Chen does not teach or suggest each and every limitation of this independent claim. Bassman also does not teach or suggest the limitations of independent claim 14 addressed above. There is also no suggestion to combine the cited references. Since dependent claim 17 further limits patentably distinct claim 14, claim 17 is believed to be allowable over the cited references.

Dependent claim 17 is also further distinguishable over the cited references. Dependent claim 17 recites "The **server management card** of claim 14, and further comprising: an input for receiving server temperature information, the controller configured to adjust the speed of at least one server cooling fan based on received server temperature information." The Examiner has acknowledged with respect to claims 5, 11, and 17 that "Chen does not expressly teach cooling fan, temperature sensor and controlling the fan speed." (Office Action at para. no. 8, page 4). Bassman discloses an embedded controller 605 that controls the speed of each fan. (Bassman at col. 8, lines 42-43). However, Bassman includes no teaching or suggestion that the embedded controller 605, or any portion thereof, could or should be incorporated into a management card as recited in the claims. The Examiner appears to argue that one of the processor cards 120 of Chen is a "management card" as recited in claim 1. (See, e.g., Office Action at para. no. 2, page 2). Bassman also includes no teaching or suggestion that the embedded controller 605 could or should be incorporated into a processor card, such as one of the processor cards 120 disclosed in Chen.

Dependent claim 17 further limits patentably distinct claim 14, is further distinguishable over the cited references, and is believed to be allowable over the cited references. The Examiner has not established a case of *prima facie* obviousness of claim 17, and Appellants respectfully request that the rejection of dependent claim 17 under 35 U.S.C. § 103(a) be withdrawn.

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Conclusion

For the above reasons, Appellants respectfully submit that the cited art neither anticipates nor renders the claimed invention obvious, and therefore the claimed invention does patentably distinguish over the cited art. Therefore, Appellants respectfully submit that the rejections to pending claims 1-19 are in error, and Appellants respectfully request that the Board reverse the Examiner and find all pending claims allowable.

Any inquiry regarding this Amendment and Response should be directed to either Jeff A. Holmen at Telephone No. (612) 573-0178, Facsimile No. (612) 573-2005 or David A. Plettner at Telephone No. (408) 447-3013, Facsimile No. (408) 447-0854. In addition, all correspondence should continue to be directed to the following address:

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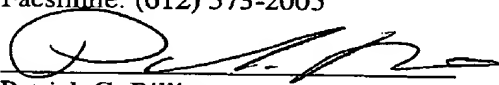
Respectfully submitted,

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CERTIFICATE UNDER 37 C.F.R. 1.8:

The undersigned hereby certifies that this paper or papers, as described herein, are being facsimile transmitted to the United States Patent and Trademark Office, Fax No. (703) 872-9306 on this 7 day of February, 2005.

By 
Name: Patrick G. Billig

Appeal Brief – Appendix A

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IN THE CLAIMS

- 1.(Previously Presented) A server system comprising:
- a plurality of printed circuit assemblies including a plurality of host processor cards;
 - a management card coupled to the plurality of printed circuit assemblies, the management card dedicated to monitoring and managing operation of the server system, including monitoring and managing on-line insertion and removal of the printed circuit assemblies.
- 2.(Previously Presented) The server system of claim 1, wherein the management card includes a management processor and a LAN switch, the LAN switch coupled to management connections of the plurality of host processor cards, and management connections of the management processor.
- 3.(Original) The server system of claim 1, and further comprising a backplane for connecting the plurality of printed circuit assemblies to the management card.
- 4.(Previously Presented) The server system of claim 3, wherein the plurality of host processor cards is configured to communicate status information to the management card via at least one I²C bus routed through the backplane.
- 5.(Original) The server system of claim 1, and further comprising:
- at least one cooling fan;
 - at least one temperature sensor; and
 - the management card configured to adjust the speed of the at least one cooling fan based on temperature data provided by the at least one temperature sensor.
- 6.(Original) The server system of claim 1, wherein the management card further comprises:
- a plurality of LEDs for providing server status information.

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7.(Original) The server system of claim 1, wherein the management card further comprises:

a plurality of serial ports for communicating with the management card.

8.(Original) A method of managing a server system comprising:

providing a plurality of host processor cards for running customer operating systems and applications;

providing a dedicated management card that does not run customer operating systems and applications; and

monitoring and managing operation of the plurality of host processor cards with the dedicated management card, including monitoring and managing hot swapping of the host processor cards.

9.(Original) The method of claim 8, and further comprising:

monitoring management LAN communications of the plurality of host processor cards with the management card.

10.(Original) The method of claim 8, and further comprising:

transmitting status information from the plurality of host processor cards to the management card via at least one I²C bus.

11.(Original) The method of claim 8, and further comprising:

monitoring the temperature of the server system with the management card; and

adjusting the speed of at least one cooling fan with the management card based on temperature data.

12.(Original) The method of claim 8, and further comprising:

providing status information on the management card via a plurality of LEDs.

13.(Original) The method of claim 8, and further comprising:

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communicating with the management card via at least one of a plurality of serial ports on the management card.

14.(Previously Presented) A management-dedicated server management card for a server system having a plurality of removable cards, the server management card comprising:

a memory for storing server management software;

a controller coupled to the plurality of removable cards for monitoring and managing operation of the server system based on the server management software, the controller providing hot-swap functionality for the plurality of removable cards; and

a multiple-port LAN switch coupled to the controller and configured to be coupled to a management connection of at least one of the plurality of removable cards.

15.(Previously Presented) The server management card of claim 14, wherein the LAN switch is coupled to the management connections of a plurality of the removable cards for monitoring management LAN communications.

16.(Original) The server management card of claim 14, and further comprising:

at least one I²C bus link coupled to the controller for receiving status information from the plurality of removable cards.

17.(Original) The server management card of claim 14, and further comprising:

an input for receiving server temperature information, the controller configured to adjust the speed of at least one server cooling fan based on received server temperature information.

18.(Original) The server management card of claim 14, and further comprising:

a plurality of LEDs for providing server status information.

19.(Original) The server management card of claim 14, and further comprising:

a plurality of serial ports for transmitting and receiving serial communications.